

Intelligence in motion

Technological improvements are changing the motion and input/output controller industry as demand from biotech, medical and pharmaceutical markets continues to grow. Ann Keffer, Galil's director of marketing, discusses the company's latest generation of controllers, which have been designed to meet these demands.

Could you start by giving us a bit of company background?

Ann Keffer: In 1983, we introduced our first microprocessor-based servo motion controller and, since then, we've been developing intelligent, high-performance motion controllers and drives for OEMs in diverse industries. We have the depth and breadth of motion control experience to help OEMs move the world with positive, successful results.

As the economic landscape continues to shift, the need for OEMs to keep equipment costs down has never been greater. From concept to production, you can rely on us to strengthen your ability to compete by providing technically advanced, flexible controllers that are feature-filled, low-cost and easy to program.

How do you think motor and motion control technology will change as the industry grows?

The motion and input/output (I/O) controller industry will more than double by 2023 due to significant growth in automation across industries, specifically biotech, medical and pharmaceuticals. Medical device OEMs designing new systems are looking for turnkey solutions that minimise time to market. Controllers will continue to become smaller, less expensive and more intelligent due to better integration and higher-performing processors, resulting in quicker positioning and finer resolution.

“Galil's highest-performance motion and I/O controllers can handle virtually any mode of motion.”

Can you take us through your full range of motion and motor controllers?

We offer the highest-performance motion and I/O controllers to meet the needs of demanding applications. All our controllers use 32-bit RISC-based processors for the highest speed and precision. Controllers are available in one to eight-axis formats and you can mix and match servos or steppers on any combination of axes. The controllers accept encoder frequencies of up to 12Mhz and output stepper pulses up to 3Mhz.

Our controllers can handle virtually any mode of motion, including point-to-point positioning; dynamic position tracking; jogging, linear and circular interpolation; PVT and contour modes; electronic gearing; and ecam. All Galil controllers are intelligent and provide non-volatile program memory with multitasking that can free up your host computer for other tasks.

What are the main advantages of your latest-generation controllers?

Galil's ultra-high-speed Accelera and Econo series represent its fifth-generation multi-axis motion controllers. The Accelera series works at much higher speeds than prior-generation controllers. Our Econo series delivers precise control in a low-cost package. The Accelera and Econo controllers can handle any mode of motion with precision and ease. Both series are available in PCI bus and ethernet/RS232 formats. Measuring only 3 × 4in, the DMC-30000 is available as a compact card-level or box-level unit and connects to an external stepper or servo motor amplifier of any power range. To minimise space, cost and wiring, our controllers can connect to internal stepper or servo drives. We also have the RIO series: a family of PLCs that provides a compact and cost-effective solution for the intelligent handling of analogue and digital I/O.

Our latest-generation motion controllers have optically isolated inputs and outputs, and feature advanced modes of motion such as electronic gearing and position tracking, and non-volatile memory with multitasking for user programs. All Galil's motion and I/O controllers include ethernet ports for easy daisy-chaining and are easy to program with Galil's intuitive, two-letter command language.

GalilSuite is the newest software for our controllers. An intuitive user interface, enhanced servo tuning capabilities with multiple tuning methods, real-time scopes, multiple device management and simplified communications utilities are just a fraction of the feature set. Other software tools include the Ladder Interface Software, GalilPVT and Frequency Analysis Software.

What future developments do you expect to see in the design of motor and motion control technology?

Embedded ethernet has become a standard communication protocol for controllers; internal switching provides better performance and saves equipment costs because external switches are not needed. Modbus TCP, ethernet/IP and EtherCAT will continue to be the standard protocols used for motion and I/O control. Wireless for remote I/O will become prevalent as tablets and smartphones become common for remote application management. And, as mentioned before, controllers will continue to get smaller, less expensive and more intelligent. ■

Further information

Galil
www.galilmc.com

